

# Frequency Mixer

MBA-EE7756/22

## Typical Performance Data

| RF<br>(MHz) | LO<br>(MHz) | CONVERSION LOSS<br>(dB) |      |      | LO<br>(MHz) | LO-RF ISOLATION<br>(dB) |      |      | LO-IF ISOLATION<br>(dB) |      |      |
|-------------|-------------|-------------------------|------|------|-------------|-------------------------|------|------|-------------------------|------|------|
|             |             | @LO (dBm)               |      |      |             | @LO (dBm)               |      |      | @LO (dBm)               |      |      |
|             |             | +4                      | +7   | +10  |             | +4                      | +7   | +10  | +4                      | +7   | +10  |
| 1770.0      | 1800.0      | 8.87                    | 9.04 | 8.84 | 1800.0      | 25.8                    | 26.3 | 24.8 | 9.5                     | 10.2 | 11.2 |
| 1950.0      | 1980.0      | 8.37                    | 7.87 | 7.84 | 1980.0      | 24.7                    | 25.2 | 23.7 | 9.2                     | 9.8  | 10.0 |
| 2050.0      | 2080.0      | 7.90                    | 7.57 | 7.37 | 2080.0      | 23.7                    | 24.2 | 23.0 | 8.7                     | 9.2  | 9.2  |
| 2100.0      | 2130.0      | 7.72                    | 7.22 | 7.18 | 2130.0      | 23.0                    | 23.5 | 22.7 | 8.5                     | 9.0  | 9.0  |
| 2430.0      | 2460.0      | 6.45                    | 6.12 | 6.42 | 2460.0      | 22.3                    | 22.7 | 21.2 | 8.7                     | 8.8  | 8.2  |
| 2760.0      | 2790.0      | 5.77                    | 5.60 | 5.73 | 2790.0      | 27.8                    | 25.2 | 22.8 | 10.5                    | 9.8  | 8.8  |
| 3090.0      | 3120.0      | 5.78                    | 5.44 | 5.74 | 3120.0      | 26.0                    | 24.7 | 23.0 | 12.7                    | 11.5 | 10.2 |
| 3420.0      | 3450.0      | 5.77                    | 5.43 | 5.73 | 3450.0      | 23.5                    | 22.8 | 21.7 | 14.8                    | 13.0 | 11.5 |
| 3600.0      | 3630.0      | 6.06                    | 5.73 | 5.86 | 3630.0      | 22.8                    | 22.0 | 20.7 | 16.3                    | 14.0 | 12.2 |
| 3650.0      | 3680.0      | 6.06                    | 5.73 | 5.86 | 3680.0      | 22.5                    | 22.0 | 20.8 | 16.7                    | 14.5 | 12.7 |
| 3700.0      | 3730.0      | 6.03                    | 5.70 | 6.00 | 3730.0      | 22.2                    | 21.5 | 20.3 | 17.0                    | 14.7 | 12.7 |
| 3750.0      | 3780.0      | 6.22                    | 5.88 | 6.02 | 3780.0      | 22.0                    | 21.5 | 20.3 | 17.8                    | 15.3 | 13.0 |
| 3800.0      | 3830.0      | 6.21                    | 5.87 | 6.17 | 3830.0      | 21.8                    | 21.2 | 20.3 | 18.3                    | 15.8 | 13.7 |
| 3900.0      | 3930.0      | 6.35                    | 6.02 | 6.32 | 3930.0      | 21.0                    | 20.8 | 19.8 | 20.0                    | 17.2 | 14.7 |
| 4000.0      | 4030.0      | 6.51                    | 6.18 | 6.48 | 4030.0      | 20.2                    | 20.2 | 19.2 | 21.0                    | 18.7 | 16.0 |
| 4050.0      | 4080.0      | 6.51                    | 6.34 | 6.64 | 4080.0      | 20.0                    | 19.8 | 18.7 | 21.2                    | 19.0 | 16.5 |
| 4080.0      | 4110.0      | 6.69                    | 6.35 | 6.65 | 4110.0      | 19.8                    | 19.7 | 18.5 | 21.2                    | 19.0 | 16.8 |
| 4100.0      | 4130.0      | 6.65                    | 6.31 | 6.78 | 4130.0      | 19.8                    | 19.7 | 18.3 | 21.3                    | 19.3 | 17.0 |
| 4150.0      | 4180.0      | 6.64                    | 6.47 | 6.77 | 4180.0      | 19.5                    | 19.3 | 18.0 | 21.5                    | 19.2 | 17.0 |
| 4200.0      | 4230.0      | 6.82                    | 6.49 | 6.79 | 4230.0      | 19.7                    | 19.2 | 17.8 | 22.2                    | 19.7 | 17.3 |
| 4300.0      | 4330.0      | 6.81                    | 6.48 | 6.78 | 4330.0      | 19.3                    | 19.0 | 17.5 | 23.8                    | 20.7 | 18.2 |
| 4400.0      | 4430.0      | 6.77                    | 6.61 | 6.91 | 4430.0      | 19.3                    | 19.0 | 17.3 | 26.7                    | 22.7 | 19.5 |
| 4410.0      | 4440.0      | 6.77                    | 6.61 | 6.91 | 4440.0      | 19.2                    | 18.8 | 17.3 | 26.8                    | 22.7 | 19.5 |
| 4500.0      | 4530.0      | 6.77                    | 6.61 | 6.91 | 4530.0      | 19.0                    | 18.5 | 17.3 | 29.5                    | 24.7 | 21.2 |
| 4600.0      | 4630.0      | 6.93                    | 6.60 | 7.07 | 4630.0      | 18.5                    | 18.2 | 16.8 | 32.5                    | 27.5 | 22.7 |
| 4700.0      | 4730.0      | 7.08                    | 6.75 | 7.05 | 4730.0      | 18.3                    | 18.2 | 17.0 | 31.7                    | 33.2 | 25.3 |
| 4740.0      | 4770.0      | 7.09                    | 6.92 | 7.06 | 4770.0      | 18.2                    | 18.0 | 17.0 | 30.2                    | 36.5 | 26.7 |
| 4770.0      | 4800.0      | 7.10                    | 6.93 | 7.23 | 4800.0      | 18.3                    | 18.3 | 17.0 | 29.0                    | 42.0 | 28.3 |
| 4800.0      | 4830.0      | 7.25                    | 6.91 | 7.21 | 4830.0      | 18.3                    | 18.3 | 17.0 | 27.8                    | 47.5 | 29.2 |
| 5070.0      | 5100.0      | 7.55                    | 7.22 | 7.35 | 5100.0      | 17.8                    | 18.7 | 17.8 | 20.5                    | 24.8 | 30.0 |
| 5400.0      | 5430.0      | 8.03                    | 7.70 | 7.83 | 5430.0      | 17.8                    | 19.3 | 19.2 | 15.8                    | 18.0 | 19.3 |

# Frequency Mixer

MBA-EE7756/22

## Typical Performance Data

| RF/LO<br>(MHz) | RF VSWR<br>(:1) |      |      | LO VSWR<br>(:1) |      |      | IF<br>(MHz) | IF VSWR<br>(:1) |      |      |
|----------------|-----------------|------|------|-----------------|------|------|-------------|-----------------|------|------|
|                | @LO (dBm)       |      |      | @LO (dBm)       |      |      |             | @LO (dBm)       |      |      |
|                | +4              | +7   | +10  | +4              | +7   | +10  |             | +4              | +7   | +10  |
| 1800.0         | 5.03            | 3.95 | 3.82 | 3.47            | 3.01 | 3.26 | 10.0        | 1.14            | 1.08 | 1.23 |
| 1980.0         | 3.95            | 3.26 | 3.17 | 2.24            | 2.67 | 3.01 | 20.0        | 1.14            | 1.08 | 1.23 |
| 2080.0         | 3.46            | 2.93 | 2.93 | 1.90            | 2.46 | 2.93 | 30.0        | 1.15            | 1.09 | 1.23 |
| 2130.0         | 3.26            | 2.80 | 2.80 | 1.76            | 2.32 | 2.80 | 50.0        | 1.17            | 1.10 | 1.23 |
| 2460.0         | 2.28            | 2.13 | 2.28 | 1.43            | 1.95 | 2.41 | 70.0        | 1.20            | 1.12 | 1.24 |
| 2790.0         | 2.01            | 2.01 | 2.17 | 1.61            | 2.07 | 2.46 | 100.0       | 1.24            | 1.17 | 1.23 |
| 3120.0         | 1.43            | 1.58 | 1.71 | 1.87            | 2.20 | 2.67 | 109.5       | 1.25            | 1.18 | 1.27 |
| 3450.0         | 1.46            | 1.50 | 1.61 | 1.67            | 1.71 | 1.95 | 150.0       | 1.34            | 1.24 | 1.31 |
| 3630.0         | 1.67            | 1.65 | 1.71 | 1.61            | 1.69 | 2.01 | 209.1       | 1.45            | 1.35 | 1.38 |
| 3680.0         | 1.69            | 1.65 | 1.71 | 1.64            | 1.78 | 2.13 | 250.0       | 1.55            | 1.42 | 1.43 |
| 3730.0         | 1.69            | 1.67 | 1.71 | 1.64            | 1.78 | 2.13 | 308.6       | 1.67            | 1.54 | 1.54 |
| 3780.0         | 1.71            | 1.69 | 1.73 | 1.74            | 1.90 | 2.28 | 350.0       | 1.77            | 1.61 | 1.61 |
| 3830.0         | 1.71            | 1.71 | 1.73 | 1.78            | 1.92 | 2.41 | 408.2       | 1.92            | 1.74 | 1.71 |
| 3930.0         | 1.78            | 1.81 | 1.83 | 1.85            | 1.98 | 2.46 | 450.0       | 2.01            | 1.83 | 1.76 |
| 4030.0         | 1.92            | 1.95 | 1.98 | 1.92            | 1.98 | 2.32 | 500.0       | 2.17            | 1.95 | 1.90 |
| 4080.0         | 1.98            | 2.04 | 2.10 | 1.95            | 1.98 | 2.32 | 507.7       | 2.20            | 1.98 | 1.88 |
| 4110.0         | 2.07            | 2.13 | 2.20 | 1.98            | 1.92 | 2.24 | 550.0       | 2.32            | 2.10 | 2.01 |
| 4130.0         | 2.07            | 2.13 | 2.20 | 1.98            | 1.92 | 2.20 | 607.3       | 2.51            | 2.28 | 2.10 |
| 4180.0         | 2.20            | 2.24 | 2.32 | 1.92            | 1.87 | 2.17 | 650.0       | 2.56            | 2.36 | 2.20 |
| 4230.0         | 2.28            | 2.37 | 2.46 | 1.90            | 1.81 | 2.13 | 706.8       | 2.73            | 2.51 | 2.51 |
| 4330.0         | 2.46            | 2.51 | 2.61 | 1.83            | 1.73 | 1.95 | 750.0       | 2.86            | 2.67 | 2.46 |
| 4430.0         | 2.61            | 2.61 | 2.73 | 1.83            | 1.71 | 1.98 | 800.0       | 3.09            | 2.80 | 2.56 |
| 4440.0         | 2.61            | 2.61 | 2.73 | 1.81            | 1.73 | 2.10 | 806.4       | 3.09            | 2.80 | 2.56 |
| 4530.0         | 2.61            | 2.61 | 2.73 | 1.77            | 1.71 | 2.01 | 905.9       | 3.18            | 3.01 | 2.73 |
| 4630.0         | 2.61            | 2.56 | 2.73 | 1.78            | 1.74 | 2.13 | 1000.0      | 3.57            | 3.36 | 2.93 |
| 4730.0         | 2.56            | 2.46 | 2.67 | 1.92            | 1.90 | 2.28 | 1005.5      | 3.46            | 3.26 | 2.93 |
| 4770.0         | 2.61            | 2.51 | 2.73 | 1.95            | 1.92 | 2.28 | 1105.0      | 3.69            | 3.46 | 3.09 |
| 4800.0         | 2.56            | 2.46 | 2.67 | 2.07            | 2.04 | 2.46 | 1204.5      | 4.09            | 3.95 | 3.36 |
| 4830.0         | 2.61            | 2.46 | 2.67 | 2.01            | 1.98 | 2.28 | 1304.1      | 4.09            | 3.81 | 3.35 |
| 5100.0         | 2.93            | 2.73 | 2.93 | 2.41            | 2.24 | 2.46 | 1403.6      | 4.26            | 3.82 | 3.26 |
| 5430.0         | 3.81            | 3.46 | 3.57 | 2.07            | 1.95 | 2.01 | 1503.2      | 3.69            | 3.46 | 3.01 |